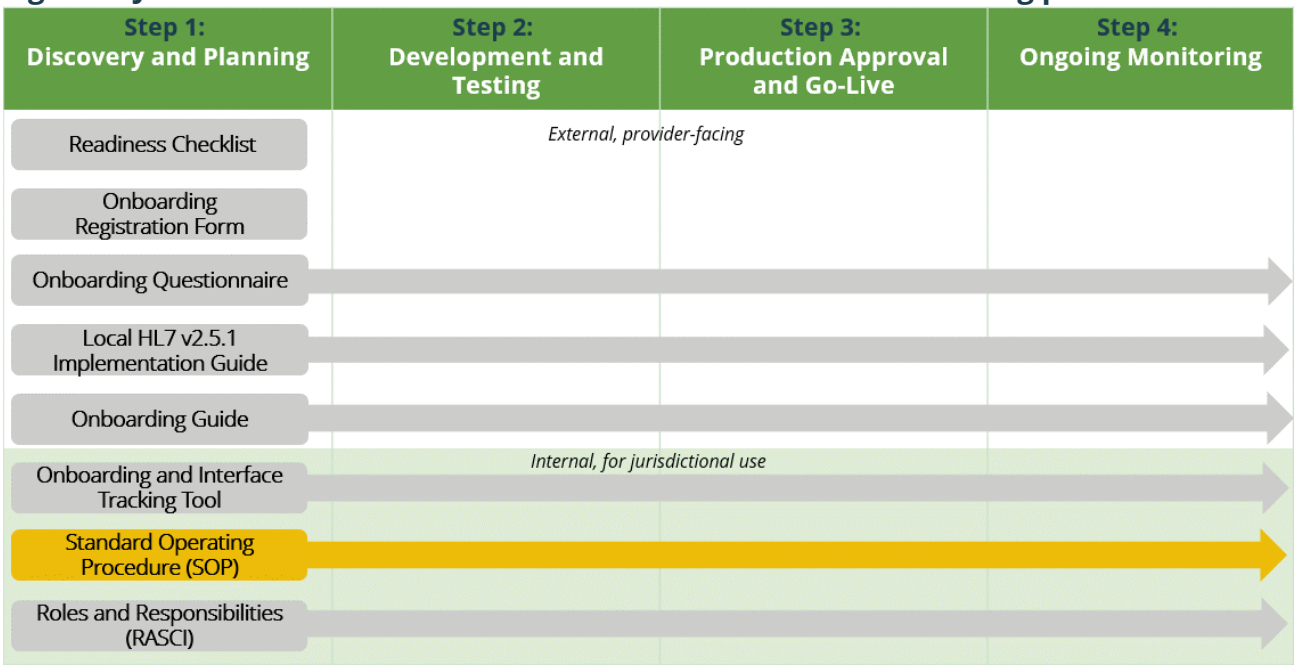
IIS Onboarding Template: Standard Operating Procedure

About this template

Use this template to develop a standard operating procedure (SOP) for jurisdictional staff to complete provider organization onboarding activities. The SOP is intended for internal use to document and guide policies, tasks, communications, and responsibilities associated with the onboarding of provider organizations. Documenting the onboarding process in an SOP helps improve the quality, accuracy, and efficiency of the process, ensures compliance in carrying out onboarding in accordance with jurisdictional policies, and ensures continuity of the process in the event of staff leave/turnover.

This template is part of a suite of templates designed to support jurisdictional onboarding, i.e., the process and activities related to establishing an electronic interface between an immunization provider's electronic health record/health information technology (EHR/health IT) system and a jurisdiction's immunization information system (IIS). Figure 1 provides a visual indicating the use of an onboarding SOP, as well as other key documents and tools, throughout the IIS onboarding process. Templates to support the development of the additional documents and tools noted in Figure 1 are also available.

Figure 1. Jurisdictional documents and tools used in the IIS onboarding process



Development of this template was informed by guidance from AIRA's Onboarding Consensus-Based Recommendations and Data Validation Guide for the Onboarding Process, as well as subject matter expert and IIS community input. The SOP is designed to be used in concert with the suite of onboarding templates available. For example, whereas the Onboarding Guide template is designed to communicate the onboarding process and steps to external audiences, the Onboarding SOP template is designed to serve as a companion internal resource for jurisdictional staff.

Use this template to develop an onboarding SOP or help ensure your current onboarding SOP is consistent with other jurisdictions and best practices. By implementing practices and documentation consistent with other jurisdictions, you can more easily work with large national providers and their EHR/health IT representatives. This standardization also enhances the perception of IIS as a nationwide network of systems.

How to use this template

1. Review this template and the Onboarding Guide template to get oriented to onboarding best practices. Consider how your process aligns with the process outlined in these templates.
2. Identify opportunities to better align your onboarding process to the process outlined in the onboarding templates.
3. Modify the Onboarding SOP to reflect your jurisdictional onboarding practices.
    a. Replace the yellow highlighted text with your jurisdictional information. Remove the yellow highlight formatting.
    b. Adapt to reflect jurisdiction-specific policies. Add, modify, and/or delete content as needed.
    c. Adapt to reflect jurisdiction-specific practices. Add, modify, and/or delete content as needed, recognizing that this template reflects an ideal and standardized onboarding process incorporating best practices. Your jurisdiction may opt to adopt some or all of these processes. For example, if your jurisdiction employs a pre-testing step for provider organizations, be sure to reflect this in Step 1a: Readiness; if your jurisdiction employs the IIS production environment with a pre-production or "test" setting to support onboarding testing, update steps for production approval and go-live, as connectivity may not need to be established a second time. Ensure numbering is accurate once activity content is final.
4. Update the table of contents to reflect final edits.
5. Delete the template cover page and instructions.
6. Save to a central location for jurisdictional staff to access, reference, and update as needed.

Implementation considerations

- Consider reviewing the Onboarding Roles and Responsibilities (RASCI) template to document staff coverage for various onboarding tasks throughout the onboarding process. Once this activity is complete, you will have a better sense of modifications you may need to make in the SOP to reflect your jurisdiction's onboarding activities. **Note:** A RASCI chart specifies individuals responsible for certain activities and should be updated when there are staffing changes. An SOP outlines expectations related to completing steps in the process and provides an indication of what role is responsible for completing a particular activity (and therefore should not need to be modified through staffing/resource changes).
- Ensure your SOP aligns with other onboarding documents and tools used in your jurisdiction. For example:
    - Your SOP should support jurisdictional staff in carrying out the onboarding process as communicated to external partners in the Readiness Checklist and Onboarding Guide.
    - Your SOP should support jurisdictional staff in working within your internal-facing onboarding tracking tool to indicate when and where to document onboarding tracking progress/notes and the staff role responsible for completing the tracking.
    - Your SOP should align with your Onboarding Roles and Responsibilities (RASCI), as outlined above.
- Ensure your jurisdictional privacy and security policies are appropriately incorporated into your onboarding processes. For example, your security policies may dictate if/how IIS credentials can be sent or stored, and/or your security policies may or may not allow ongoing use of the connection to the IIS test environment.
- Consider adding specificity to Step 2b: Testing to guide IIS staff in conducting a comprehensive HL7 message conformance review, data quality review, and validation of submitted data using jurisdiction-specific tools and capabilities. Refer to the AIRA Data Validation Guide for the IIS Onboarding Process and Data Quality Assurance in Immunization Information Systems guide for best practices.
- Consider additional SOPs for related program activities, such as:
    - Monitoring production interfaces (**Note:** This activity is minimally represented in this SOP under Step 4: Ongoing Monitoring. However, the activities may warrant their own SOP(s) given they may be completed by different staff and they are ongoing in nature, rather than project-based.)
    - Onboarding documentation maintenance
    - Onboarding program status review and process improvement
    - Help desk monitoring, triage, and follow-up
- Identify how your jurisdiction will manage change to the onboarding processes and documentation and how often this SOP should be reviewed for potential changes.
- Identify who is responsible for maintaining and updating this SOP as needed.

- Identify who should be involved in review of changes and who needs to approve changes.
- Identify process improvements to help streamline your onboarding process and reduce jurisdictional staff burden, e.g.:
    - Can you identify common bottlenecks in your processes? Consider implementing process changes to eliminate or reduce them
    - Can you automate or streamline activities or communication to stakeholders?

*******Delete the cover page and instructions before finalizing for use. *******

Standard Operating Procedure: Onboarding Provider Organizations

Policies and procedures for IIS staff to establish and test an electronic data interface with a provider organization and track onboarding progress

[Document Version, Date]

Table of Contents

Version history

Version	Date	Notes

Overview

Purpose

This document outlines the policies and procedures associated with onboarding provider organizations to data exchange with the IIS and provides direction to staff on how to carry out the procedures to complete onboarding.

Resources/tools

The following documents, tools, and resources are used in the onboarding process. [Note: modify/add as needed.]

Internal-facing

- Onboarding and Interface Project Tracking Tool: [link]
- Onboarding RASCI Chart: [link]
- Onboarding Standard Operating Procedure (this document): [link]
- Shared drive: [link (e.g., Dropbox, Google Drive, etc.)]
- Data Validation Guide: AIRA-developed guide that provides recommendations on the data validation process within onboarding
- Data Quality Assurance in Immunization Information Systems: AIRA-developed guide that highlights key areas of focus for improving data quality and ways to implement recommended approaches

External-facing

- Onboarding/data exchange website: [link]
- Onboarding Readiness Checklist: [link]
- Onboarding Registration: [link]
- Onboarding Questionnaire: [link]
- Local HL7 v2.5.1 Implementation Guide: [link]
- Onboarding Guide: [link]
- HL7 v2.5.1 Implementation Guide for Immunization Messaging, Release 1.5 and Addendum
- EHR-IIS Transport Layer Protocol Recommendation Formal Specification, Version 1.2 (SOAP Web Services Specification)
- NIST Immunization Test Suite
- CDC IIS Data Code Sets

Definitions

[Note: modify/add as needed.]

- **Provider organization**: Organization that desires to exchange data with the IIS; this includes but is not limited to clinics, hospitals, pharmacies, long-term care organizations, etc. May be a single-facility organization or an organization that represents multiple facilities.
- **Provider organization onboarding team (provider onboarding team)**: Contacts identified by the provider organization on the Onboarding Registration and Onboarding Questionnaire that will be involved in establishing the interface with the IIS. Includes onboarding project lead, onboarding technical lead, immunization lead, and EHR/health IT vendor representative. **Note:** Depending on the organization, these roles may be fulfilled by one or more individuals.
- **Facility**: Unique physical site/location where patient immunizations are assessed and/or administered. A provider organization may have a single facility or multiple facilities.

General onboarding policies

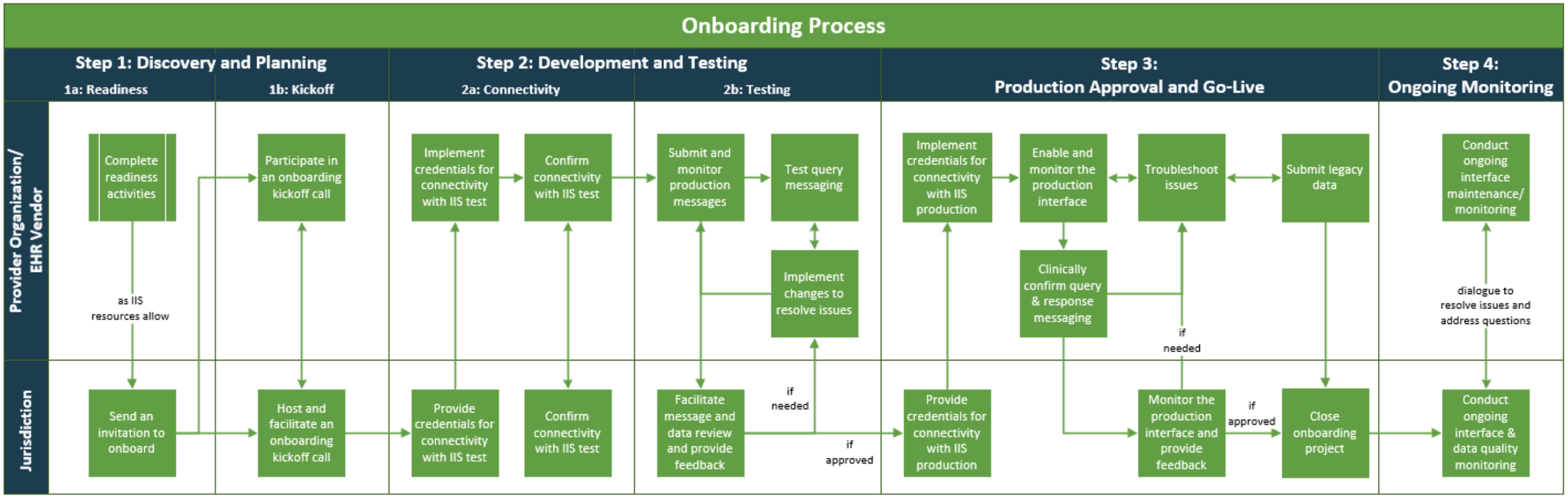
[Note: Modify/add as needed.]

- **IIS authorization**: Provider organizations that are authorized to access the IIS, per [local law/regulation], include [note type(s) of organizations].
- **IIS enrollment**: Only provider organizations that are enrolled for authorized access to the IIS [link to IIS enrollment] shall be onboarded.
- **Tracking**: Onboarding progress and notes shall be tracked in the [Onboarding Tracking Tool], as noted throughout the procedures.
- **Facility-level authorization and identification**: Each facility associated with the provider organization should be identifiable in the interface, via use of facility-level IIS identifiers.
- **Query-only interface**: A provider organization request for a query-only interface should be reviewed to determine whether it is appropriate (e.g., if data submissions to the IIS are reported via another EHR/health IT system or if the provider organization does not record or administer immunizations).
- **Provider onboarding team availability**: If a key resource on the provider onboarding team will be out of office or on leave during the scheduled onboarding project, the project may be placed back in queue (if connectivity has not commenced) or placed on hold (if at connectivity or beyond).
- **Placing an onboarding project on hold**: Onboarding projects should be placed on hold and IIS staff work on the onboarding project should pause in the following circumstances:
    - When a key resource from the provider organization project team is not available for an [extended period of time as defined by jurisdiction] after onboarding has begun
    - When the provider onboarding team is [non-responsive as defined by jurisdiction] to outreach and is not adequately progressing through onboarding steps

    - When the provider onboarding team has requested placing the project on hold
    - When the provider onboarding team does not agree to proceed and/or commit to onboarding

  Work with the provider onboarding team to determine when the project can potentially be revisited and picked back up.
- **Restarting an on-hold onboarding project**: When restarting an onboarding project that has been on hold, consider the following in determining whether to pick up where the project left off, whether you need to revisit previously completed steps, or whether you need to restart from the beginning:
    - Time on hold
    - Resource availability from the project team
    - Provider onboarding team feedback on issues that led to project being placed on hold
- **Re-onboarding:** Re-onboarding (completing the process again for an organization with an existing interface) is needed in the following circumstances:
    - The provider organization adopts a new EHR/health IT system
    - There is a change to the HL7 version used (e.g., 2.3.1 to 2.5.1 interface)
    - There is a change to the transport method (e.g., migrating to the use of the CDC WSDL)
    - There are significant data quality or data exchange issues with a production interface that are not resolved through retesting and/or regular outreach and follow-up
- **Retesting**: Retesting (completing an abbreviated onboarding process focused on testing) is needed when there is a minor change to an existing interface, such as:
    - Addition of new facilities that use the same EHR/health IT system
    - Addition of query messaging to an existing submission interface
    - Addition of dose-decrementing from IIS vaccine inventory
    - Significant data exchange or data quality issues

Process flow diagram



Procedures

Step 1a: Discovery and Planning – Readiness

Objective

Ensure a provider organization's readiness for onboarding.

Policies

[Note: Modify/add as needed.]

- **Readiness**: To be deemed "ready" for onboarding, provider organizations shall be enrolled in the IIS, have submitted an onboarding registration, and have submitted an onboarding questionnaire.
- **Prioritization**: If multiple provider organizations are ready for onboarding, prioritize the invitation to onboard based on the following considerations:
    - Completion of the readiness activities
    - Desired data submission format and transport (bidirectional exchange in HL7 2.5.1 using the CDC WSDL and SOAP Web Services is preferred)
    - Participation in the Vaccines for Children (VFC) program
    - Volume of immunizations administered
    - Types of immunization(s) administered
    - Number of associated facilities
    - Organization type
    - Patient population served
    - Length of time in the onboarding queue
- **Step 1a exit criteria**: A provider organization may proceed to the next step in the onboarding process when onboarding readiness activities are confirmed as complete and when an invitation to participate in an onboarding kickoff is extended.

Roles and responsibilities

[Role name] has primary responsibility for completing Step 1a: Discovery and Planning – Readiness activities. Deviations are noted below, if applicable.

Activity 1: Review the provider organization's onboarding registration

1.1 Send an onboarding registration welcome upon receipt of the submitted registration (within one business day). Notify the provider organization that the registration has been received and is being reviewed. Advise the provider organization on its next steps, including submission of the Onboarding Questionnaire, review of the Onboarding Guide, and review of the HL7 v2.5.1 Local Implementation Guide, as indicated in the Readiness Checklist. **Note:** Automate this task if possible.

1.2 Review the registration to identify concerns and/or gaps that may impact onboarding:

a. Cross-check the registration with information maintained in the IIS to update provider organization and facility records as needed.

b. Review submitted information to identify potential questions and/or concerns relevant to onboarding.

c. If needed, follow up with the provider organization to request additional information and/or to clarify/confirm submitted information.

1.3 Complete tracking. Add an entry to the onboarding and interface project tracking tool to reflect the provider organization onboarding project:

Note: Automate this task if possible to have your registration tool generate a new entry in the project tracking tool with the following information.

a. Enter organization and interface information*: Organization Name, IIS Org ID*, *# of Associated Facilities, Provider Org Type, Reason for Onboarding, Interface Type, and EHR/Health IT Vendor.*
b. Change the onboarding status to *1a. Readiness*.
c. Enter onboarding contact information: *Name, Role/Title, Phone, Email.*
d. Enter Step 1a: Readiness information: *Date IIS Enrollment Complete, Date Registration Complete, and Notes: Provider Readiness*, if applicable*.*

Activity 2: Review the provider organization's onboarding questionnaire

2.1 Send a questionnaire submission acknowledgment upon receipt of the submitted questionnaire (within one business day). Notify the provider organization that the questionnaire has been received and is being reviewed. Advise the provider organization on next steps, indicating that the jurisdiction will reach out with any questions and to schedule an onboarding project kickoff call as resources allow and that, in the meantime, the provider should review the Onboarding Guide and the HL7 v2.5.1 Local Implementation Guide. **Note:** Automate this task if possible.

2.2 Review the questionnaire to identify concerns and/or gaps that may impact onboarding:

a. Cross-check the questionnaire with information maintained in the IIS to update provider organization and facility records as needed.
b. Review submitted information to identify potential questions and/or concerns relevant to onboarding.
c. If needed, follow up with the provider organization to request additional information and/or to clarify/confirm submitted information, before considering the provider organization for onboarding.

2.3 Complete tracking. Update the onboarding project in the tracking tool:

a. Enter Step 1a: Readiness information: *Date Questionnaire Complete, Date All Readiness Activities Complete, and Notes: Provider Readiness*, if applicable*.*
b. Update the onboarding status to *_In Queue.*
c. If needed, modify previously entered information.

Activity 3: Identify the highest-priority provider organization to onboard

3.1 Review onboarding projects with a status of _In Queue.

3.2 Apply the onboarding prioritization policy to identify the highest-priority project to initiate.

3.1 Complete tracking. Update the onboarding and interface project tracking tool:
   a. Enter onboarding status information: *Queue Priority*.

Activity 4: Send out an invitation to onboard

4.1 Send an invitation to onboard to the provider onboarding team for the highest-priority provider organization to onboard.

4.2 Complete tracking. Update the onboarding and interface project tracking tool:
   a. Enter Step 1a: Readiness information. Add *Notes: Provider Readiness* to indicate outreach attempts and provider organization response, if applicable.
   b. Enter Step 1b: Kickoff information: *Date Invitation to Onboard Sent*.

As time allows Conduct outreach to support provider organization readiness

- Identify provider organizations that may have registered for onboarding but have not submitted onboarding forms (registration and/or questionnaire).
- Perform outreach to provider organizations to assist them with completing readiness activities.

Step 1b: Discovery and Planning – Kickoff

Objective

Initiate the onboarding project; ensure a provider organization's commitment to proceed with the project.

Policies

[Note: Modify/add as needed.]

- **Kickoff representation**: The provider organization should have organizational representation on the onboarding kickoff call. It is not sufficient for an EHR/health IT vendor to participate on the provider organization's behalf.
  - If a provider organization representative is not available for an onboarding kickoff call, the call should be rescheduled.
  - If a call cannot be rescheduled within a week, then the provider organization may be placed back in the onboarding queue.
- **Step 1b exit criteria**: Provider organizations are ready for the next step in onboarding after participation in an onboarding kickoff call and indication of commitment and availability to proceed in the onboarding project as scheduled.

Roles and responsibilities

[Role name] has primary responsibility for completing Step 1b: Discovery and Planning – Kickoff activities. Deviations, if applicable, are noted below.

Activity 1: Schedule and prepare for the onboarding kickoff call

1.1 Work with the provider onboarding team to identify a meeting date and time based on the provider onboarding team and IIS staff availability.

1.2 Identify questions/clarifications based on review of the onboarding forms to address as part of the onboarding kickoff call.

1.3 Schedule and send out an onboarding kickoff calendar invitation; include an *onboarding kickoff agenda*. The agenda should address:

- Welcome and introductions
- Review of the onboarding process: steps and activities, expectations, resource allocation needs, and anticipated time commitment
- Discuss and confirm onboarding registration and questionnaire information
- Confirm commitment to onboarding and review next steps

Activity 2: Facilitate the onboarding kickoff call

2.1 Facilitate the onboarding kickoff call, according to the agenda.

a. Address questions/clarifications based on review of the onboarding forms. For example, address resource allocations or missing responses from the Onboarding Questionnaire.
b. Obtain the provider organization's agreement to proceed and commit to onboarding.
c. If needed, place the onboarding project on hold or back in queue. Refer to the Special Project – placing onboarding projects on hold section for further guidance.

2.2 Complete tracking. Update the onboarding project in the tracking tool:

a. Change the onboarding/interface status to *1b: Kickoff*.
b. Enter Step 1b: Kickoff information: *Date Onboarding Kickoff Call* and *Notes: Onboarding Kickoff*, if applicable.

Step 2a: Development and Testing – Connectivity

Objective

Ensure a provider organization's EHR/health IT system establishes connectivity with the IIS testing environment.

Policies

[Note: Modify/add as needed.]

- **Sharing of test credentials**: Credentials shall be shared with [contact(s)] via [secure method (e.g., secure email, SFTP)].
- **Storage of test credentials**: Credentials shall be stored [indicate which credentials are allowed to be stored and where credentials will be stored/accessible].
- **Step 2a exit criteria**: Provider organizations are ready to move on in the process after confirmation of successful connectivity with the IIS testing environment.

Roles and responsibilities

[Role name] has primary responsibility for completing Step 2a: Development and Testing – Connectivity activities. Deviations, if applicable, are noted below.

Activity 1: Generate and share IIS test environment credentials

Note: Aim to share the credentials and instructions to establish connectivity within two business days of the onboarding kickoff call.

1.1 Generate credentials specific to this provider organization to support connectivity with IIS test environment, including: [Modify as needed]
   a. [IIS test environment Provider Organization ID]
   b. [IIS test environment Facility IDs for each facility participating in the interface]
   c. [IIS Provider Organization's Username for the IIS test environment]
   d. [IIS Provider Organization's Password for the IIS test environment]

1.2 Securely share credentials with the appropriate party/parties via [method]. Also include the IIS test environment WSDL URL: [IIS test environment WSDL URL].

1.3 Send a brief summary of the kickoff call and instructions for connectivity. Address the following:
   - Provide key takeaways from the kickoff call.
   - Issue instructions to establish connectivity with IIS test (i.e., use of credentials to support connectivity between the EHR/health IT system and the IIS test environment).
   - Ask the provider onboarding team to let the IIS team know when connectivity is attempted or established.
   - Indicate how, once connectivity is established, HL7 messages should be flowing from the provider's production environment to the IIS testing environment and that this starts the testing process. Indicate how IIS staff will review VXU/ACK and QBP/RSP expectations and review the submitted messages and data over a minimum two-week period to assess HL7 conformance and data quality. Indicate that testing will be extended in one-week increments as needed until conformance and/or data quality issues are addressed.

Activity 2: Confirm connectivity

2.1 Monitor the IIS test environment HL7 logs to confirm connectivity.
   a. If needed, provide technical support to resolve connectivity issues until the provider organization's HL7 messages are submitted in the IIS test environment.

2.2 Complete tracking. Update the onboarding project in the tracking tool:
   a. Change the onboarding/interface status to *2. Development & Testing.*
   b. Enter Step 2: Development and Testing information: *Date IIS Test Credentials Provided, Date Successful IIS Test Connection,* and *Notes: Development and Testing*, if applicable.

Step 2b: Development and Testing – Testing

Objective

Identify and communicate interface and/or data quality issues. Ensure provider organization follow-up to address issues to meet data quality expectations.

Policies

[Note: Modify/add as needed.]

- **Production data used for testing**: Testing shall be completed with production data submitted by the provider organization.
- **Testing period extension**: Testing shall be extended in one-week increments as needed until issues are addressed and testing expectations are met.
- **Lack of provider organization progress in addressing testing issues**: If there is no/minimal provider organization progress on addressing identified issues after several weeks of testing, then work with the provider onboarding team to determine the root cause of the lack of progress. Determine if the project is likely to result in a successful production connection within a reasonable time frame. If not, place the project on hold and dissolve existing connections.
- **Step 2b exit criteria**: A provider organization may move on to the next step in the process after all testing expectations are met and the organization is approved to proceed with a production connection.

Roles and responsibilities

[Role name] has primary responsibility for completing Step 2b: Development and Testing – Testing activities. Deviations, if applicable, are noted below.

Activity 1: Monitor and review provider organization HL7 message submissions for critical issues

1.1 Each business day during the testing period, monitor and review HL7 message logs in the IIS test environment for message submissions from the provider organization and IIS responses to submitted messages.
   a. If needed, follow up with the provider onboarding team to alert them to critical issues needing immediate attention.

Activity 2a: Work with the provider onboarding team to review QBP/RSP expectations

2a.1 Work with the provider onboarding team to review when the IIS will return different RSP profiles depending on query processing [modify as needed]:
   - Exact match found, RSP Z32 returned
   - Exact match found, RSP Z42 returned
   - Candidate list of potential matches found, RSP Z31 returned
   - No matches found, RSP Z33 returned
   - Too many potential matches found, RSP Z33 returned
   - Match found but cannot be shared due to privacy reasons, RSP Z33 returned

2a.2 Work with the provider onboarding team to test queries. [Select one: Instruct the provider onboarding team to submit queries for patients included in previous VXU submissions – OR – Instruct the provider onboarding team to query using IIS-prescribed test scenarios/test patients/test messages to elicit different IIS responses].
   a. If needed, follow up to address questions and/or concerns.

Activity 2b: Conduct initial message conformance review and data quality review and validation and provide feedback

2b.1 Between days five and seven of testing, use [tool(s)] to conduct a comprehensive HL7 message conformance review and data quality review and validation of submitted data. Consider the following, in the context of the provider organization profile (organization type, immunization practices, and patient population):

VXU and QBP messages

a. Inclusion of jurisdiction-specific codes and values where appropriate, including IIS-provided identifiers
b. Indication of submission of messages from each facility

VXU messages

a. Proportion of VXU submissions resulting in various ACK responses, as noted in the ACK MSA-1: AA, AE, AR
b. Volume and types of errors in VXU submissions, as noted in ACK error segments
c. Population of locally required and high-value data elements (High-value data elements serve a specific purpose, e.g., patient matching and deduplication, reminder/recall, vaccine accountability, assessing equity, etc.)
d. Validity, accuracy, and completeness of data submission

2b.2 Summarize findings from the message conformance review and data quality review and validation, including follow-up expectations.

a. Highlight issues that must be addressed prior to go-live.
b. Provide additional detail, such as summary reports, client IDs, instructions to access message logs, etc. to assist the provider onboarding team in addressing identified issues.

2b.3 Share testing feedback with the provider onboarding team.

a. If needed, assist or support the provider organization with technical support, such as how to:
    - Access and use features and/or reports in the IIS to help monitor and troubleshoot message and/or data issues
    - Review and interpret acknowledgment (ACK) messages
    - Identify and address the root cause of data quality issues
    - Actively monitor submissions
    - Interpret RSP messages
    - [Other topics]

2b.4 Complete tracking. Update the onboarding project in the tracking tool:

a. Enter Step 2: Development and Testing information: *Notes*: *Development and Testing.*

Activity 3: Conduct additional message conformance review and data quality review and validation and provide feedback

3.1 Between days 12 and 14 of testing, repeat Activity 2b above.

a. Identify whether the provider organization onboarding team sufficiently addressed previously identified issues.
b. Indicate go-live implications.
c. If needed, extend testing in one-week increments, repeating Activity 2 above until testing issues are resolved. Notify the provider organization of the extended testing time frame and the specific issue(s) that need to be addressed prior to go-live.

Activity 4: Confirm and share approval to proceed with go-live

4.1 Confirm the provider organization has met all testing expectations and is ready to proceed with connectivity with the IIS production environment. Confirm:

- The provider organization successfully completed at least two weeks of testing, during which time it demonstrated its ability to submit messages with minimal critical errors/failures or significant issues
- Data quality expectations are met and identified issues were successfully resolved
- The provider organization has demonstrated its ability to address issues as needed, e.g., provided staff training to support successful ongoing exchange

4.2 Share the approval for go-live and information on next steps with the provider onboarding team. Indicate that the onboarding project is not yet complete, as their next steps will include connectivity with the IIS production environment, close monitoring of the production interface, clinical confirmation of query and response messaging, and submission of legacy data.

4.3 Complete tracking. Update the onboarding project in the tracking tool:

a. Enter Step 2: Development and Testing information: *Notes: Development and Testing, Date Passed Testing and Approved for Go-Live.*
b. Update the onboarding status to *3. Production Approval & Go-Live.*

Step 3: Production Approval and Go-Live

Objective

Initiate production data exchange and ensure continued interface and data quality. Work with the provider organization to obtain legacy data.

Policies

[Note: Modify/add as needed.]

- **Disabling test credentials**: Credentials used to support provider organization connectivity with the IIS testing environment shall be disabled once [indicate when test credentials will be disabled according to jurisdictional security/privacy policies—for example, once the provider organization has passed testing and is approved for go-live].

- **Sharing of production credentials**: Credentials shall be shared with [contact(s)] via [secure method].
- **Storage of production credentials**: Credentials shall be stored [indicate which credentials are allowed to be stored and where credentials will be stored/accessible].
- **Legacy data**: Provider organizations are expected to submit legacy data (all immunization data held in the IIS) to support IIS data completeness. Legacy data may be submitted via [indicate acceptable method(s)].
- **Step 3 exit criteria**: A provider organization can move on in the process after confirmation of successful production exchange, submission of legacy data, and onboarding closeout.

Roles and responsibilities

[Role name] has primary responsibility for completing Step 3: Production Approval and Go-Live activities. Deviations, if applicable, are noted below.

Activity 1: Generate and share IIS production environment credentials

1.1 Disable access to the provider organization's test credentials.

1.2 Generate credentials specific to this provider organization to support connectivity with IIS production environment, including: [Modify as needed]
   a. [IIS production environment Provider Organization ID]
   b. [IIS production environment Facility IDs for each facility participating in the interface]
   c. [IIS Provider Organization's Username for the IIS production environment]
   d. [IIS Provider Organization's Password for the IIS test environment]

1.3 Securely share credentials with the provider onboarding team via [method]. Include the IIS production environment WSDL URL: [IIS production environment WSDL URL].

Activity 2: Provide instructions on completing remaining onboarding activities

2.1 Provide the provider onboarding team with instructions to complete production connectivity and remaining onboarding activities. Address:
   - Use of credentials to support connectivity between the EHR/health IT system and the IIS production environment
   - Monitoring the production interface for critical errors, failures, and significant issues
   - Providing clinical confirmation of query and response messaging
   - Submission of legacy data

Activity 3: Confirm production connectivity

3.1 Monitor the IIS production environment HL7 logs to confirm connectivity.
   a. If needed, provide technical support to resolve connectivity issues until the provider organization's HL7 messages are submitted in the IIS production environment.

3.2 Complete tracking. Update the onboarding project in the tracking tool:
   a. Enter Step 3 information: *Date IIS Prod Credentials Provided, Date Successful IIS Prod Connection* and *Notes: Production Approval and Go-Live*.

Activity 4a: Conduct immediate post go-live monitoring

4a.1 Closely monitor the production submissions for two weeks, immediately after go-live.
   a. Confirm that the provider organization is submitting messages from each facility participating in the interface.
   b. Ensure continued submission of messages with minimal critical errors, failures, or significant issues.
   c. If needed, inform the provider organization of any issues that need to be addressed prior to closing out the onboarding project. Notify provider organization of any extended post go-live monitoring time frame and reason for the extension [high critical errors, failures, or significant issues, etc.], along with the requested resolution. Indicate that, if there are significant issues identified at this step, the provider organization may be required to go back to Step 2: Development and Testing.

4a.2 Complete tracking. Update the onboarding project in the tracking tool:
   a. Enter Step 3 information: *Date Passed Immediate Post-Go-Live Monitoring* and *Notes: Production Approval and Go-Live*.

Activity 4b: Obtain clinical confirmation of query/response messaging

4b.1 Work with the provider organization to receive clinical confirmation of appropriate Query/Response messaging. Ensure that a physician or other clinical user confirms that the EHR queries retrieve appropriate IIS matches and that the returned patient/vaccination/evaluation/forecast data are consumed and/or displayed correctly by the EHR.

4b.2 Complete tracking. Update the onboarding project in the tracking tool:
   a. Enter Step 3 information: *Date QBP/RSP Messaging Clinically Confirmed* and *Notes: Production Approval and Go-Live*.

Activity 4c: Request and process legacy data

4c.1 Work with the provider organization to prepare for legacy data submission.
   a. Identify the volume of legacy data.
   b. If needed, coordinate a specific time (e.g., after business hours or on the weekend) for the provider onboarding team to submit legacy data.

4c.2 Monitor and review the legacy data submission.
   a. If needed, work with the provider to troubleshoot any submission and/or data quality issues.

4c.3 Complete tracking. Update the onboarding project in the tracking tool:
   a. Enter Step 3 information: *Date Legacy Data Imported* and *Legacy Data Notes*.

Activity 5: Confirm completion of onboarding activities

5.1 Confirm the provider organization has met all onboarding expectations and is ready to proceed with ongoing exchange. Confirm:
   a. The provider organization interface has minimal critical errors, failures, or significant issues over a two-week immediate post-go-live monitoring period
   b. The provider organization confirmed successful query and response messaging
   c. The provider organization successfully submitted legacy data

Activity 6: Close out the onboarding project

6.1 Inform the provider onboarding project team of the onboarding project close and transition to ongoing monitoring.
   a. Inform the provider organization of the IIS expectations of it to support ongoing monitoring and error resolution of its production interface and data quality.
   b. Inform provider organization of available IIS resources (e.g., IIS help desk email or customer service line) for IIS training, data exchange support, and troubleshooting.
   c. Ask the provider organization to confirm/identify a point of contact for production interface monitoring and troubleshooting.

6.2 Receive confirmation of the provider organization point of contact for ongoing monitoring and troubleshooting.

6.3 Inform the provider organization of the onboarding project closeout. Celebrate the project close and thank the provider onboarding team for their participation in the onboarding process and in the IIS.

6.4 Complete tracking. Update the onboarding project in the tracking tool:
   a. Enter Step 3 information: *Date Onboarding Close*.
   b. Change the onboarding status to *4. Ongoing Monitoring*.
   c. Update contacts.

Step 4: Ongoing Monitoring

Objective

Ensure successful ongoing exchange with a provider organization.

Policies

[Note: Modify/add as needed.]

Roles and responsibilities

[Role name] has primary responsibility for completing Step 4: Ongoing Monitoring activities. Deviations, if applicable, are noted below.

Ongoing Continue to monitor the provider organization interface

Note: Automate these tasks if possible.

- Conduct daily and weekly monitoring of ACK/error reports.
  - Review interface logs on a daily basis to monitor for critical errors.
  - Review ACK/error trends on a weekly basis.
  - If needed, notify the provider organization of questions and/or issues needing follow-up.
- Conduct quarterly data quality monitoring of aggregated submitted data; provide data quality feedback to the provider organization.
- Use IIS data and reports to assist in monitoring data submissions.
  - If needed, follow up with the provider organization on questions and/or concerns.

- Complete tracking. Update the onboarding project in the tracking tool:
  a. Enter Step 4 information: Add *Notes: Ongoing Monitoring*, such as requests from the provider organization/a facility about an interface issue and IIS outreach regarding issues needing attention and resolution.

Ongoing Communicate IIS updates to all provider organizations

- Update provider organizations and other stakeholders on any IIS updates or issues that may or will impact their data exchange interface. Communicate what changes are coming, how this impacts the stakeholders, and what is needed from your stakeholders (if applicable).
  - Updates to code sets, IIS software, transport methods, HL7 version, data flow, etc.
  - Planned releases
  - Planned downtimes

Ongoing Keep IIS records updated

- Ensure provider organization information within the IIS remains up to date when the following changes occur:
  - Facility closures
  - Organization/facility name changes
  - Address change
  - Staff/contact transition

Special Topics

Query-only interface

Objective

Onboard a provider organization with a query-only interface.

Roles and responsibilities

[Role name] has primary responsibility for onboarding for query-only interfaces.

Procedures

Note: The process to establish a query-only interface should take approximately one to two weeks from the kickoff call to project close. Initial query/response testing is done in the IIS test environment, as indicated, followed by clinical confirmation in the IIS production environment.

1. Follow the processes associated with the following steps, modifying as needed to reflect activities associated with establishing a query-only interface:
    - Step 1a: Discovery and Planning – Readiness
    - Step 1b: Discovery and Planning – Kickoff
    - Step 2a: Development and Testing – Connectivity
    - Step 2b: Development and Testing – Testing
        - Test EHR queries and IIS responses using IIS-prescribed test scenarios/test patients/test messages to confirm testing produces expected results.
        - Ensure testing addresses the following scenarios [modify as needed]:
            - Exact match found, RSP Z32 returned
            - Exact match found, RSP Z42 returned
            - Candidate list of potential matches found, RSP Z31 returned
            - No matches found, RSP Z33 returned
            - Too many potential matches found, RSP Z33 returned
            - Match found but cannot be shared due to privacy reasons, RSP Z33 returned
    - Step 3: Production Approval and Go-Live
    - Step 4: Ongoing Monitoring

Retesting

Objective

Complete an abbreviated testing protocol for provider organizations that need to modify an existing interface. Modifications may include addition of new facilities, adding query to a submission-only interface, or adding dose-decrementing capabilities.

Roles and responsibilities

[Role name] has primary responsibility for working with provider organizations to complete retesting activities.

Policies

[Note: Modify/add as needed.]

- **Retesting Environment**: Retesting may be completed in either the IIS testing environment or the IIS production environment. Considerations for making this decision include the type of interface modification needed and history of working with the provider organization.
- **Re-onboarding**: Re-onboarding, i.e., restarting the onboarding process, is needed when there is a change to a key component of the interface, such as a change in the transport and/or format or when there is a migration to a new EHR/health IT product or IIS.

Procedures

1. Identify what change(s) are needed.
2. Identify what testing is needed, based on change(s) and previous experience with the provider organization and its EHR/health IT representatives.
3. Inform the provider onboarding team about the retesting steps.
    a. As needed, help the provider onboarding team troubleshoot issues.
4. Confirm retesting is complete and close out the retesting project.

5. Complete tracking. Update the onboarding project in the tracking tool:
    a. Add notes associated with Step 4: Ongoing Monitoring
    b. [Enter text].

Placing a project on hold

Objective

Pause an initiated onboarding project, after an onboarding kickoff call, to dedicate resources elsewhere and revisit once a provider organization is ready to engage/continue.

Roles and responsibilities

[Role name] has primary responsibility for on-hold procedures.

Procedures – placing on hold

1. Inform the provider onboarding team of the project hold, indicating the reason for the pause in the project and intended length of the hold.

2. Complete tracking. Update the onboarding project in the tracking tool:
    a. Change status to *X_On Hold*
    b. Indicate *On Hold* information:
        - Date placed on hold
        - Reason for the hold (e.g., provider organization contact is on leave, provider organization has failed to resolve identified issues for X amount of time, etc.)

Procedures – Re-initiating a project after a hold

1. Approximately two weeks prior to the expiration of the hold period, check in with the provider onboarding team about their readiness to re-engage.
2. Work with the provider onboarding team to identify a date when onboarding will resume.
3. Decide on how the project will resume (e.g., continue from the last onboarding step completed before the hold or restart the onboarding from the beginning again).
4. Inform the provider onboarding team of next steps.
5. Complete tracking. Update the onboarding project in the tracking tool:
    a. Change the status.
    b. Indicate on hold information: date removed from on hold and total number of days on hold.

Appendix

Communications Timeline

The following table provides a summary view of key communications shared with a provider onboarding team throughout an onboarding project. **Note:** Consider templating these communications for ease of use and adaptation to individual onboarding projects as needed.

Table 1. Communications with the provider onboarding team during an onboarding project

Step	Communication
Step 1a: Discovery and Planning – Readiness	Onboarding registration welcome
	Questionnaire submission acknowledgment
	Invitation to onboard
Step 1b: Discovery and Planning – Kickoff	Onboarding kickoff agenda
Step 2a: Development and Testing – Connectivity	Summary of kickoff call and instructions for connectivity
Step 2b: Development and Testing – Testing	Testing feedback
	Approval for go-live and information on next steps
Step 3: Production Approval and Go-Live	Instructions for production connectivity and remaining activities
	Onboarding project closeout and transition to ongoing monitoring
Step 4: Ongoing Monitoring	Quarterly data quality report/feedback